2017 Technical Training Guide
Welding School » Professional Seminars » Robotics » Educational Materials

Prices, Policies and Dates Subject to Change
Welding is everywhere, and Lincoln Electric has been there since the beginning.

Lincoln Electric has always been a leader and innovator in the design and production of arc welding equipment and consumables. Headquartered in Cleveland Ohio, we are also a worldwide leader in robotic arc welding systems as well as plasma and oxyfuel cutting equipment. The catalog you hold in your hands contains some of the best performing, most well made and tested welders and consumables on the market today.

We are committed to your success. At Lincoln Electric, we have a global team of professionally trained Technical Sales Representatives, Application Engineers, and Customer Service Representatives ready to help you improve quality and productivity, while reducing costs. And with more than 2,000 Authorized Distributor partners, no other company is better able to serve your welding and cutting needs.

Who We Are
» The people of the Lincoln Electric Company strive to meet the goals set forth by our founders John and James Lincoln.
» Make a product you can take pride in, so the customer can too.
» Listen to the people that use your products, and always look for ways to make it better.
» Lead by design and innovation, and never accept that it can’t be improved.
» Be the best.

We’re proud to say that for over 115 years, people have chosen Lincoln Electric products. No matter where you work; from a coal mine to a skyscraper, an oil derrick to your garage, there’s a Lincoln Electric welder and consumable that can help you make it the best.
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Arc Welding Safety – Materials and Products

Lincoln Electric Safety Materials
Lincoln Electric offers a variety of free training materials on arc welding safety. Access the following information online:

- Arc Welding Safety brochure (E205)
- Arc Welding Safety poster (E201)
- “Welding Safely - The Way The Pros Do It” (DVD)
- Arc Welding Safety Powerpoint® presentation with script (included on every “Arc Welding Process Training Materials” CD)
- OSHA Hexavalent Chromium Standards (MC09-12)
- MSDS sheets

ANSI Z49.1 Safety Document
The American Welding Society offers a FREE download of the American National Standard Institute’s “Safety in Welding, Cutting, and Allied Processes” document (ANSI Z49.1:2012). This is the welding industry’s comprehensive reference on safety. This document is a must for every welding school, fabricator and home hobbyist. Get your free copy today at: www.aws.org/technical/facts.

Environmental Systems for Welding Schools
Some welding applications (welding school booths, welding in confined spaces, etc.) may warrant additional safety precautions from welding fumes, such as using fume extraction equipment. Lincoln Electric offers a full line of environmental systems for schools and welding shops. Product solutions vary from single or dual arm units to multi-arm centralized fume extraction systems. Some of the advantages of a system by Lincoln Electric are:

- Expert technical assistance available from one company on all your welding products – equipment, consumables and fume extraction
- Follow OSHA and AWS guidelines
- Reduce energy costs by indoor recirculation vs. exhausting to outside
- Provide source capture using lightweight user-friendly arms
- Offer working lamp and arc sensor technology options
- Variable speed fans increase or decrease based on demand
- Sound-absorbing boxes and in-line duct silencer lessen noise
- Custom central systems designed to your specific application

For More Information, Contact:
The Lincoln Electric Company Automation Division
Phone: 800-833-9363 (WELD) or 216-383-2667
Email: automation@lincolnelectric.com
Full Line of Equipment, Consumables and Accessories

Welding Products
Lincoln Electric is the world leading manufacturer of arc welding equipment, consumables and accessories for stick, TIG, MIG, flux cored and submerged arc welding, as well as oxyfuel and plasma cutting. We manufacture a full line of products for welding schools, light to heavy duty metal fabricators, maintenance shops, home use, etc. Lincoln Electric’s product line includes:

» Welding equipment
» Welding consumables
» Accessory equipment and parts
» Cutting equipment
» Automation
» Weld Fume Control
» Gas apparatus by Harris Products Group

Educational Discounts
Lincoln Electric offers a large discount to welding educational institutions on our complete line of products. The Lincoln Educational Discount is applied through sales to schools by our network of welding distributors. Contact your local Lincoln Electric Sales Office for more details.

Where to Get More Details
For complete details on all Lincoln Electric welding products, see our website at www.lincolnelectric.com and/or request a copy of our Product Catalog (E1.10). Or contact your local Lincoln Technical Sales Representative to discuss the most appropriate Lincoln Electric products for your particular school or other welding applications.
Overview of Welding School

School Offering
Lincoln Electric has one of the oldest and most prestigious welding schools in the United States. Founded in 1917, the school has taught over 100,000 students from around the world. On staff are eleven full time, professional instructors with a wealth of knowledge and experience. Many of them also teach courses off-site, as well as provide track side welding support at the top motorsports racing events in the U.S., including Indianapolis 500, Daytona 500, etc.

Lincoln Electric’s Welding School offers a variety of classes, from a 6 week Basic course to an advanced 15 week Comprehensive Program, as well as 1 week classes on specific welding processes, certification or customized programs. Classes run from 8:00 a.m. – 2:30 p.m. daily, 5 days per week and 50 weeks per year. Students spend about 20% of their time in the classroom and 80% in the booth learning to weld. Instructor to student ratio is kept small to provide plenty of individual help. A large supply of steel plate is provided so students spend all their time learning to weld, not cutting and preparing practice coupons.

Benefits of Attending
» Work with highly trained and qualified instructors who are committed to your success
» Learn and practice welding in a safe working environment
» Receive a Lincoln Electric Welding School graduation certificate upon successful completion of the course
» Combine your new welding skills with Lincoln Electric’s excellent reputation in the industry for producing quality students to help improve your chances of landing a great welding job
» Network with other students in the welding industry
### INTRODUCTION TO WELDING
- **Course Fee:** $555.00
- **Registration Fee:** $80.00
- **Sessions:**
  - January 3 - 6, 2017
  - January 16 - 20, 2017
  - February 6 - 10, 2017
  - February 27 - March 3, 2017
  - March 27 - 31, 2017
  - April 3 - 7, 2017
  - April 17 - 21, 2017
  - May 1 - 5, 2017
  - May 8 - 12, 2017
  - May 22 - 26, 2017
  - June 5 - 9, 2017
  - June 19 - 23, 2017
  - July 31 - August 4, 2017
  - August 14 - 18, 2017
  - August 21 - 25, 2017
  - September 11 - December 22, 2017

### BASIC PLATE & SHEET METAL
- **Course Fee:** $2,100.00
- **Registration Fee:** $125.00
- **Sessions:**
  - January 3 - February 10, 2017
  - February 13 - March 24, 2017
  - March 27 - May 5, 2017
  - May 8 - June 2, 2017
  - June 19 - July 14, 2017
  - July 31 - September 8, 2017
  - September 11 - October 20, 2017

### PIPE WELDING
- **Course Fee:** $2,100.00
- **Registration Fee:** $125.00
- **Sessions:**
  - January 3 - 27, 2017
  - February 13 - March 10, 2017
  - March 27 - April 21, 2017
  - May 8 - June 2, 2017
  - June 19 - July 14, 2017
  - July 31 - September 8, 2017
  - September 11 - October 20, 2017

### PLASMA, OXYFUEL, ALLOY & HARDFACING
- **Course Fee:** $820.00
- **Registration Fee:** $125.00
- **Sessions:**
  - January 30 - February 10, 2017
  - March 13 - 24, 2017
  - April 24 - May 5, 2017
  - June 5 - 16, 2017
  - July 17 - 28, 2017
  - October 9 - 20, 2017
  - November 20 - December 1, 2017

### GAS TUNGSTEN ARC WELDING
- **Course Fee:** $600.00
- **Registration Fee:** $90.00
- **Sessions:**
  - January 9 - 13, 2017
  - January 30 - February 3, 2017
  - February 6 - 10, 2017
  - February 13 - 17, 2017
  - February 27 - March 3, 2017
  - March 27 - 31, 2017
  - April 3 - 7, 2017
  - April 17 - 21, 2017
  - May 1 - 5, 2017
  - May 8 - 12, 2017
  - May 22 - 26, 2017
  - June 5 - 9, 2017
  - June 19 - 23, 2017
  - July 31 - August 4, 2017
  - August 14 - 18, 2017
  - August 21 - 25, 2017
  - October 2 - 6, 2017
  - October 23 - 27, 2017
  - November 6 - 10, 2017
  - December 4 - 8, 2017

### FLUX-CORED ARC WELDING
- **Course Fee:** $525.00
- **Registration Fee:** $75.00
- **Sessions:**
  - January 3 - 6, 2017
  - February 27 - March 3, 2017
  - May 8 - 12, 2017
  - September 11 - December 22, 2017

### COMPREHENSIVE PROGRAM
- **Course Fee:** $6,670.00
- **Registration Fee:** $125.00
- **Sessions:**
  - January 3 - April 14, 2017
  - February 13 - May 26, 2017
  - March 27 - July 7, 2017
  - May 8 - August 18, 2017
  - July 31 - November 10, 2017
  - September 11 - December 22, 2017

### BASIC SUBMERGED ARC WELDING
- **Course Fee:** $575.00
- **Registration Fee:** $85.00
- **Sessions:**
  - March 20 - 24, 2017

### ADVANCED SUBMERGERED ARC WELDING
- **Course Fee:** $325.00
- **Registration Fee:** $45.00
- **Sessions:**
  - May 30 (Tuesday) - June 1, 2017

### ADVANCED API PIPE
- **Course Fee:** $1,300.00
- **Registration Fee:** $125.00
- **Sessions:**
  - January 30 - February 10, 2017
  - March 13 - 24, 2017
  - April 24 - May 5, 2017
  - June 5 - 16, 2017
  - July 17 - 28, 2017
  - August 28 - September 8, 2017
  - October 9 - 20, 2017
  - November 27 - December 1, 2017

### GTAW (TIG) PIPE
- **Course Fee:** $1,300.00
- **Registration Fee:** $125.00
- **Sessions:**
  - January 30 - February 10, 2017
  - March 13 - 24, 2017
  - April 24 - May 5, 2017
  - June 5 - 16, 2017
  - July 17 - 28, 2017
  - August 28 - September 8, 2017
  - October 9 - 20, 2017
  - November 27 - December 1, 2017

### ADVANCED MOTORSPORTS
- **Course Fee:** $1,000.00
- **Registration Fee:** $125.00
- **Sessions:**
  - January 23 - 27, 2017
  - March 13 - 17, 2017
  - June 26 - 30, 2017
  - August 28 - September 1, 2017
  - October 16 - 20, 2017

### BASIC MOTORSPORTS
- **Course Fee:** $735.00
- **Registration Fee:** $110.00
- **Sessions:**
  - January 16 - 20, 2017
  - March 6 - 10, 2017
  - June 19 - 23, 2017
  - August 21 - 25, 2017
  - October 9 - 13, 2017

### CWI PREP COURSE
- **Course Fee:** $325.00
- **Registration Fee:** $45.00
- **Sessions:**
  - May 8 - 12, 2017
  - July 10 - 14, 2017
  - October 23 - 27, 2017

### AWS CWI SEMINAR AND EXAM
- **For fees, please contact AWS**
- **Sessions:**
  - May 14 - 20, 2017
  - July 16 - 22, 2017
  - October 29 - November 4, 2017
Introduction to Welding

Course Description
Designed to instruct welders in welding safety and welding techniques utilizing various processes like Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Gas Tungsten Arc Welding (GTAW), and plasma cutting.

Course Content
Day 1
Introduction to welding safety and the Fill Freeze and Fast Fill groups of electrodes. One half of the stick lecture will be today. Weld with 6013 flat and horizontal sheet metal. Weld with 7024-1 flat and horizontal 3/8 inch to 1/2 inch plate, single pass and three pass.

Day 2
Second half of stick lecture. Cover Fast Freeze (6010 and 6011), and low hydrogen groups of electrodes. Weld flat and vertical up with both groups of electrodes.

Day 3
Basic MIG lecture. Weld short arc, globular, spray, and pulse spray.

Day 4
Basic TIG lecture. Weld on steel and stainless steel.

Day 5
Aluminum TIG welding and plasma cutting.

Course starting time is 8:00 a.m. - 2:30 p.m., Monday thru Friday.
30 Clock Hours: Lab - 25, Class - 5

Course Fee: $555.00
Registration Fee: $80.00

2017 Course Dates:
January 3 - 6
January 16 - 20
February 20 - 24
March 6 - 10
April 17 - 21
May 15 - 19
August 7 - 11
September 11 - 15
September 25 - 29
October 30 - November 3
November 13 - 17
Basic Plate and Sheet Metal

Course Description
Designed to instruct welders in arc welding safety and the Shielded Metal Arc Welding process (SMAW - Stick). The course lasts 6 weeks, involving approximately 180 hours of booth instruction, lecture and practice.

Course Content

Week 1
Introduction to welding safety and electrodes: types, selection, classification and qualification.
30 Clock Hours: Lab - 25, Class - 5

Week 2
Discussion of power source: types, selection and duty cycle as well as cable sizing, arc blow and welding symbols.
Week 2 Welding Test
30 Clock Hours: Lab - 26, Class - 4

Week 3
Discussion of electrodes: advantages, limitations, and vertical-up vs. vertical down in addition to certification and qualification test training.
30 Clock Hours: Lab - 27, Class - 3

Week 4
Discussion of non-destructive testing, fillet gauge use and weld size determination as well as a review of low hydrogen electrode procedures and techniques.
30 Clock Hours: Lab - 28, Class - 2

Week 5
Practicing all of the manipulative arc welding techniques learned during the prior four weeks.
Week 5 Welding Test. Final Exam and Evaluation.
30 Clock Hours: Lab - 29, Class - 1

Week 6
Introduction to oxyfuel safety and oxyfuel processes: cutting and welding. Welding done on bevel plates with E7018; stringers vs. weave.
30 Clock Hours: Lab - 29, Class - 1

Course Fee: $2,100.00
Registration Fee: $125.00

2017 Course Dates:
January 3 - February 10
February 13 - March 24
March 27 - May 5
May 8 - June 16
July 31 - September 8
September 11 - October 20
Pipe Welding

Course Description
Designed to instruct welders in arc welding safety and the Shielded Metal Arc Welding process (SMAW - Stick) of welding pipe either to meet ASME (vertical up) or API (vertical down) welding code. The course lasts 4 weeks, involving approximately 120 hours of booth instruction, lecture and practice.

Prerequisites
Students who have not passed the Lincoln Electric Welding School’s Basic Plate and Sheet Metal welding course will be required to weld a sample test plate consisting of vertical and overhead welds with E6010 and E7018 electrodes, which will be evaluated by the instructor before being permitted to start the course. Students must also specify either ASME or API before the start of the Pipe Course. Must have thorough knowledge of 6010/7018 welding electrodes to weld in pipe class.

Course Content
ASME Week 1
Learn fundamentals of ASME pipe welding, which include 2G, proper fit-up, joint preparation, tacking, and electrode selection in vertical up welding. Additionally, comparative techniques like whip vs. drag root pass are discussed along with testing procedures and grading.
30 Clock Hours: Lab - 28, Class - 2

ASME Week 2
Week 2 Welding Test
30 Clock Hours: Lab - 28, Class - 2

ASME Week 3
Review 5G, proper fit-up, joint preparation, tacking and electrode selection, in vertical up welding. Working with 6010 and 7018 electrodes in 5G position. Final test at end of week.
30 Clock Hours: Lab - 28, Class - 2

ASME Week 4
Discuss 6G and weld troubleshooting, which includes DC- for less burnthrough and land vs. gap. In addition, AWS, ASME, and API code are explained.
30 Clock Hours: Lab - 29, Class - 1

Please Note: Students must pass welding test to receive diploma.

Course Fee: $2,100.00
Registration Fee: $125.00

2017 Course Dates:
January 3 - 27
February 13 - March 10
March 27 - April 21
May 8 - June 2
June 19 - July 14
September 11 - October 6
October 23 - November 17
Pipe Welding (cont’d.)

API Week 1
Learn fundamentals of API pipe welding, which include 2G, proper fit-up, joint preparation, tacking and electrode selection in vertical down welding.
30 Clock Hours: Lab - 28, Class - 2

API Week 2
30 Clock Hours: Lab - 28, Class - 2

API Week 3
Review 5G, proper fit-up, joint preparation, tacking and electrode selection in vertical down welding using cellulose electrode for root. Vertical up hot, fill and cap with low hydrogen electrodes.
30 Clock Hours: Lab - 28, Class - 2

API Week 4
Discuss 6G and troubleshooting, which includes DC- for less burnthrough, and land vs. gap. In addition, AWS, ASME, and API code are explained as well as pipe welding joints positioned at a 45° angle using vertical down techniques.
30 Clock Hours: Lab - 29, Class - 1
Plasma, Oxyfuel, Alloy and Hardfacing

Course Description
Designed to instruct welders in welding safety, plasma cutting and gouging, the oxyfuel process, alloy theory and applications, and hardfacing. Additionally, various welding processes and techniques will be discussed as it relates to these topics. The course lasts 2 weeks, involving approximately 60 hours of booth instruction, lecture and practice.

Course Content
Week 1
- Learn fundamentals of oxyfuel brazing (OFB) and oxyfuel welding (OFW).
- Discuss the use of welding vs. brazing vs. soldering.
- Hands-on experience utilizing Tempil™ sticks
- Learn the AWS numbering system, selection of proper brazing rods and fluxes, and troubleshooting of the oxyfuel process
- In addition to a comparison between carbon arc gouging vs. plasma arc gouging, discuss the operation of plasma cutting along with standard troubleshooting and operational techniques
- Learn fundamentals of metal identification including the AISI and ASTM designations as well as steel trade names
- Discuss low carbon, medium carbon, high carbon and alloy steel chemistry according to AWS D1.1 welding code
- Determine preheat and discuss carbon equivalent, heat input (Joules) and heat-treating including tempering, annealing, normalizing and stress relieving
- Learn fundamentals of hardfacing and 6 basic types of wear while using different welding processes: SMAW, FCAW, SAW and OFW
30 Clock Hours: Lab - 25, Class - 5

Week 2
- Learn fundamentals of cast iron including types of cast iron and repair procedures utilizing nickel and steel based electrodes as well as oxyfuel brazing (OFB) for cast iron repair
- Learn fundamentals of stainless steel including the AISI numbering system, AWS classification system of electrodes, and carbide control
- Use -15, -16, and -17 stainless stick electrodes to perform welds on stainless steel in all positions
30 Clock Hours: Lab - 25, Class - 5

Course Fee: $820.00
Registration Fee: $125.00
2017 Course Dates:
January 30 - February 10
March 13 - 24
April 24 - May 5
June 5 - 16
July 17 - 28
October 9 - 20
November 20 - December 1
Gas Tungsten Arc Welding

Course Description
Designed to instruct welders in welding safety and the Gas Tungsten Arc Welding process (GTAW - TIG). The course lasts 1 week, involving approximately 30 hours of booth instruction, lecture and practice.

Course Content
» Learn fundamentals of GTAW (TIG) for steel, stainless steel and aluminum.
» Welding procedures are taught on aluminum, carbon and stainless steels.
» Welding consists of edge, corner, lap and fillet welds in all positions.
» Welding is limited to regular thin flat material, which does not include thick plate, pipe or other irregular shapes.
30 Clock Hours: Lab - 26, Class - 4

Please Note: If a student desires to practice on different types of welds, and/or materials other than those offered, material must be provided by student.

Course Fee: $600.00
Registration Fee: $90.00

2017 Course Dates:
January 9 - 13
January 30 - February 3
February 6 - 10
February 13 - 17
February 27 - March 3
March 27 - 31
April 3 - 7
April 17 - 21
May 1 - 5
May 8 - 12
May 22 - 26
June 5 - 9
June 19 - 23
July 31 - August 4
August 14 - 18
September 18 - 22
October 2 - 6
October 23 - 27
November 6 - 10
November 27 - December 1
December 4 - 8
Gas Metal Arc Welding – Semiautomatic

Course Description
Designed to instruct welders in welding safety and the Gas Metal Arc Welding process (GMAW - MIG). The course lasts 1 week, involving approximately 30 hours of booth instruction, lecture and practice.

Course Content
» Learn fundamentals of GMAW (MIG).
» Instruction on the metal arc transfers of short circuiting, globular, spray arc, pulsed spray arc, Power Mode and Surface Tension Transfer®.
» Learn how various shielding gases affect gas metal arc welding.
» Individual booth time will be dedicated to welding on mild steel, stainless steel and aluminum in all welding positions.
30 Clock Hours: Lab - 26, Class - 4

Please Note: If a student desires to practice on different types of welds, and/or materials other than those offered, material must be provided by student.

Course Fee: $525.00
Registration Fee: $75.00

2017 Course Dates:
January 9 - 13
January 23 - 27
February 13 - 17
February 20 - 24
March 27 - 31
April 3 - 7
April 24 - 28
May 8 - 12
May 15 - 19
June 12 - 16
June 26 - 30
July 31 - August 4
August 7 - 11
September 11 - 15
September 25 - 29
October 30 - November 3
November 13 - 17
November 27 - December 1
December 4 - 8
December 11 - 15
**Flux-Cored Arc Welding – Semiautomatic**

**Course Description**
Designed to instruct welders in welding safety and the Flux-Cored Arc Welding process (FCAW) for both self-shielded (Innershield®) and gas-shielded (Outershield® and UltraCore®) methods. The course lasts 1 week, involving approximately 30 hours of booth instruction, lecture and practice.

**Course Content**
» Learn fundamentals of FCAW Self-Shielded (Innershield®).
» Learn fundamentals of FCAW Gas-Shielded (Outershield®).
» Weld on 10 gauge through 1 inch thick material in all positions.
» Use a variety of electrodes, wire feeders and power sources.
» Typical joint designs used in construction and shipbuilding are welded, which consist of fillet, lap, groove and butt welds.
» Final weld tests are on 1 inch bevel plate vertical up with and without a backin bar.

30 Clock Hours: Lab - 26, Class - 4

*Please Note: If a student desires to practice on different types of welds, and/or materials other than those offered, material must be provided by student.*

**Course Fee:** $525.00  
**Registration Fee:** $75.00  
**2017 Course Dates:**
- January 3 - 6
- February 27 - March 3
- May 22 - 26
- May 30 (Tuesday) - June 2
- August 14 - 18
- August 21 - 25
- October 2 - 6
- October 23 - 27
- November 6 - 10
Comprehensive Program

Course Description
Designed to instruct welders in arc welding safety and all of the common welding processes. The course lasts 15 weeks and involves more than 450 hours of hands-on instruction.

Course Content
» Basic Plate and Sheet Metal (6 weeks)
» Pipe-Stick (ASME or API) (4 weeks)
» Plasma, Oxyfuel, Alloy and Hardfacing (2 weeks)
» Gas Tungsten Arc Welding (1 week)
» Gas Metal Arc Welding - Semiautomatic (1 week)
» Flux-Cored Arc Welding - Semiautomatic (1 week)

Please Note: If a student desires to practice on different types of welds, and/or materials other than those offered, material must be provided by student.

Course Fee: $6,670.00
Registration Fee: $125.00

2017 Course Dates:
January 3 - April 14
February 13 - May 26
March 27 - July 7
May 8 - August 18
July 31 - November 10
September 11 - December 22
Motorsports – Basic Materials Program

What Is It?
Five day technical program limited to 8 students that is approximately 30% classroom and 70% hands-on.

The primary focus of this course is on basic motorsports materials and applications (GMAW, GTAW, Oxyfuel, and Plasma Cutting) including aluminum and stainless steel. In addition to these concepts, new technologies will be introduced, which include Waveform Control Technology® and Precision TIG® technology.

Purpose
To enhance your knowledge of current thinking in arc welding safety, processes, instruction, concepts, equipment and consumables as well as your welding skills.

Course Content
» Day 1 - Safety and Gas Tungsten Arc Welding (TIG)
» Day 2 - Gas Metal Arc Welding (MIG)
» Day 3 - Alloy (metallurgy, identification, classification, preheating)
» Day 4 - Alloy (aluminum and stainless steel)
» Day 5 - Oxyfuel, plasma cutting, open lab and plant tour, and TIG kit with gas lens parts.

40 Clock Hours: Lab - 32, Class - 8

Time: 8:00 am to 4:00 pm
Lunch: 10:50 am to 11:20 am

Course Fee: $735.00
Registration Fee: $110.00

2017 Course Dates:
January 16 - 20
March 6 - 10
June 19 - 23
August 21 - 25
October 9 - 13
Motorsports – Advanced Materials Program

What Is It?
Five day technical program limited to 8 students that is approximately 30% classroom and 70% hands-on.

The primary focus is on advanced motorsports materials and applications utilizing the Gas Tungsten Arc Welding (GTAW) process including materials like chrome-moly, inconel, magnesium and titanium. In addition to these concepts, new technologies will be introduced, which include Waveform Control Technology® and Precision TIG® technology.

Purpose
To enhance your knowledge of current thinking in arc welding safety, processes, instruction, concepts, equipment and consumables as well as your welding skills.

Course Content
» Day 1 - Safety, GTAW (TIG) chrome-moly
» Day 2 - GTAW (TIG) titanium
» Day 3 - GTAW (TIG) inconel
» Day 4 - GTAW (TIG) magnesium
» Day 5 - New products, open lab and plant tour

40 Clock Hours: Lab - 32, Class - 8

Time: 8:00 am to 4:00 pm
Lunch: 10:50 am to 11:20 pm

Course Fee: $1,000.00
Registration Fee: $125.00

2017 Course Dates:
January 23 - 27
March 13 - 17
June 26 - 30
August 28 - September 1
October 16 - 20
Basic Submerged Arc Welding

Course Description
Designed to instruct welding personnel in arc welding safety and the submerged arc welding process (SAW). This course lasts 1 week, involving approximately 30 hours of booth instruction, lecture and practice. Class size is limited to 7 students.

Course Content
» Arc welding safety for SAW process.
» Learn fundamentals of SAW.
» Conventional SAW systems will be used, including the NA-3, NA-5, LT-7, Flextec 650 and DC-1000.
» Weld with single and twin wire equipment systems.
» Wire and flux applications, polarity and troubleshooting of weld defects are discussed.

Please Note: Specialists will be made available to discuss your particular needs from equipment and consumables to design.

Course Fee: $575.00
Registration Fee: $85.00

2017 Course Dates:
March 20 - 24
Advanced Submerged Arc Welding — AC/DC 1000

Course Description
Designed to instruct welding personnel in arc welding safety and the submerged arc welding process (SAW) using Lincoln Electric Power Wave® AC/DC advanced submerged arc systems. This course lasts 3 days, involving approximately 18 hours of lecture, booth welding and practice. Class size is limited to 6 students. Classes start at 8:00 a.m. until 2:30 p.m. All classes start on Monday and end on Wednesday at 2:30 pm unless stated otherwise.

Course Content
Arc welding safety.
» Learn to weld with the Power Wave® AC/DC system — a state-of-the-art Waveform Control Technology® 1000 amp inverter welding machine. Also covered is the Power Feed® 10A Controller.
» Experience firsthand how the Power Wave® AC/DC system and Nextweld™ technology can help you gain significant increases in productivity and quality over conventional SAW technology.
» Wire and flux applications, polarity and troubleshooting of weld defects are discussed.

Please Note: Specialists will be made available to discuss your particular needs from equipment and consumables to design.

Course Fee: $325.00
Registration Fee: $45.00

2017 Course Dates:
May 30 (Tuesday) - June 1
Advanced API Pipe Welding

Course Description - Week 1
Designed to instruct welding personnel in arc welding safety and API vertical down pipe welding. This class specifically relates to butt joints as well as reinforcement sleeves using cellulosic and low hydrogen electrodes in accordance with API 1104 code. Student must supply sleeve. Student will be working with schedule 40 12 inch pipe.

Course Description - Week 2
Designed to instruct welding personnel in arc welding safety and API vertical down pipe welding. This class specifically relates to Brach “T” joints using cellulosic and low hydrogen electrodes in accordance with API 1104 code. The pipe you will be working with is schedule 40 12 inch.

Prerequisites
Students must have passed the Lincoln Electric Welding School’s 4-week API course or must show proof of welding experience or take an API weld test in 5G which will be evaluated by an instructor before being permitted to start the course. Must have thorough knowledge of 6010 and 7018 welding electrodes to participate in this class.

Class is two weeks long, Monday thru Friday, 6 hours per day.
30 hours per week.
60 Clock Hours: Lab - 58, Class - 2

Course Fee: $1,300.00
Registration Fee: $125.00

2017 Course Dates:
January 30 - February 10
March 13 - 24
April 24 - May 5
June 5 - 16
July 17 - 28
August 28 - September 8
October 9 - 20
December 4 - 15
GTAW (TIG) Pipe

Course Description - Week 1
Designed to instruct welding personnel in arc welding safety and the welding of the root and hot pass done with the GTAW (TIG) process. Fill and cap passes done with low hydrogen (Excalibur®) stick electrodes or as student’s ability dictates. GTAW (TIG) all the way out (root, hot, fill and cap) with carbon steel or stainless steel filler metal on carbon steel pipe. The material used for week one will be 6 inch schedule 40 and schedule 80 pipes. 30 Clock Hours: Lab - 28, Class - 2

Course Description - Week 2
Designed to instruct welding personnel in arc welding safety and the welding of the root pass and hot pass done with the GTAW (TIG) process. Then fill and cap passes done with low hydrogen (Excalibur®) stick electrodes or as student’s ability dictates. GTAW (TIG) all the way out (root, hot, fill and cap) with carbon steel or stainless steel filler metal on carbon steel pipe. The material used for week two will be 2 inch extra strong pipe. 30 Clock Hours: Lab - 28, Class - 2

Prerequisites
Students who have not passed the Lincoln Electric Welding School’s Basic Plate and Sheet Metal Course will be required to weld a sample test plate consisting of 3 pass vertical up and overhead welds with 6010 and 7018 electrodes which will be evaluated by an instructor before being permitted to start course. A basic understanding of TIG welding is helpful.

Class is two weeks long, Monday thru Friday, 6 hours per day, 30 hours per week.

Course Fee: $1,300.00
Registration Fee: $125.00

2017 Course Dates:
January 30 - February 10
March 13 - 24
April 24 - May 5
June 5 - 16
July 17 - 28
August 28 - September 8
October 9 - 20
December 4 - 15
CWI Prep Course, Seminar and Exam

Lincoln Electric CWI Prep Course
This is a course taught by the Lincoln Electric Welding School to give you an extra week of low cost preparation for the AWS CWI Seminar and Exam. Included in the program are demonstrations/discussions of the various welding processes, including but not limited to metallurgy, discontinuities, preheat, welding symbols, etc. It is offered the week before the AWS CWI Seminar.

(Student is responsible for providing their own code book.)

Register for the CWI Prep Course through Lincoln Electric Welding School.

Course Fee: $325.00
Registration Fee: $45.00

2017 Course Dates:
May 8 - 12
July 10 - 14
October 23 - 27

AWS CWI Seminar and Exam
Lincoln Electric is a host site for the American Welding Society’s (AWS) Certified Welding Inspector (CWI) seminar and examination. In the seminar you will be taught by an AWS instructor how to reference AWS code, examine welds and prepare for the CWI exam on that following Saturday (proctored by AWS).

Seminar starts at 1:00 p.m. on Sunday. Please register for the seminar and exam through AWS.

Note: You must register 8 weeks prior to CWI exam date in order to reserve your spot.

Requirements
Contact Lincoln Electric Welding School and download CWI packet from http://www.aws.org/certification/CWI or call AWS at 800-443-9353 ext. 273 to register for exam.

Note: 5 year detailed work history must be completed before testing. Not a Résumé.

Seminar and Exam Fee:
(For fee, please contact AWS)

2017 Seminar Dates:
May 14 - 20
July 16 - 22
October 29 - November 4
Qualification and Certification Training

Qualification Test Training
Shielded Metal Arc Welding
Additional training is available to graduates of the Lincoln Basic Plate and Sheet Metal Welding who wish to take an operator qualification test for AWS structural code work, and to graduates of the Lincoln Pipe Welding Course who wish to take similar tests for ASME (vertical-up) or API (vertical down) code work. Welders with equivalent experience may also qualify for this training.

Flux-Cored Arc Welding Self-Shielded/Gas-Shielded
Classes are available to companies and/or individuals who want to practice welding techniques for passing an operator qualification test or procedure qualification test. This course is also designed to give the proper application skills to an instructor for in-plant training of FCAW-S (Innershield®) and/or FCAW-G (UltraCore®).

Qualification Test Training
  » AWS Test Semiautomatic Flux-Cored Arc Welding Self-Shielded
  » 3/8 in. AWS Fillet Test Shielded Metal Arc Welding
  » AWS Test Shielded Metal Arc Welding
  » ASME Test Shielded Metal Arc Welding
  » ASME/API Pipe Welding
  » Low Hydrogen Pipe
  » API Butt/Branch/Sleeve

Please Note for Qualification Courses
  » One week is usually sufficient for anyone with welding experience in the process being tested.
  » Customers must furnish plate of the type to be used in practicing for the qualification tests.
  » The cost of testing ranges from $150.00 to $300.00 for AWS, ASME or API codes and is paid directly to an independent testing laboratory where the test sample is taken. Actual test costs vary throughout the country depending upon the facility.

Training/Certification
The Lincoln Electric Welding School can meet your needs for customized training and/or certification at Lincoln Electric Corporate in Cleveland, Ohio or at your particular location.

Please Note: Actual testing done by an independent testing facility.

AWS Test Semiautomatic FCAW
Course Fee: $525.00
Registration Fee: $75.00

3/8" AWS Fillet Test-SMAW (stick)
Course Fee: $375.00
Registration Fee: $55.00

AWS/ASME Test-SMAW (stick)
Course Fee: $375.00
Registration Fee: $55.00

ASME or API Pipe Welding Test
Course Fee: $650.00
Registration Fee: $95.00

Low Hydrogen Pipe Welding Test
Course Fee: $650.00
(certification fee extra)
Registration Fee: $95.00

MIG, FCAW
Course Fee: $525.00
Registration Fee: $75.00

TIG
Course Fee: $600.00
Registration Fee: $90.00

Any Questions? Contact our Weld School 216-383-2259
Online Course Registration

Registration Information
Register online for all Lincoln Electric training courses, including Professional Seminars, Distributor Training Programs, Service School Courses, Robotic Training Courses, and Welding School Courses.

How To Register
Register for all courses with a few simple steps:
Go to the Lincoln Electric website at www.lincolnelectric.com.

1. Click EDUCATION from the home page and select WELDING SCHOOL or SEMINARS AND WORKSHOPS
2. Select a COURSE
3. Select a COURSE DATE
4. Complete the REGISTRATION INFORMATION

Technical Training Questions?
Contact Vicki Wilson
Phone: (216) 383-2240
e-mail: vicki_wilson@lincolnelectric.com

Welding School Questions?
Contact Danette Janecek
Phone: (216) 383-7525
e-mail: danette_janecek@lincolnelectric.com

Service School Questions?
Contact Carmen Becker
Phone: (216) 383-2310
e-mail: carmen_becker@lincolnelectric.com

International Training Questions?
Contact Customer Experience at: customer_experience@lincolnelectric.com

Automation School Questions?
Phone: (888) 935-3878

INTRODUCTION TO WELDING
Course Description
Designed to introduce students to welding safety and welding techniques using various processes, including shielded metal arc welding (SMAW), gas tungsten arc welding (GTAW), and gas metal arc welding (GMAW), and learn safety measures that can be taken to reduce fire hazards.

Course Content
Day 1: Introduction to welding, Safety, and Welding Equipment.
Day 2: Welding Processes and Techniques, including SMAW, GTAW, and GMAW.
Day 3: Welding Procedures and Techniques, including SMAW, GTAW, and GMAW.
Day 4: Welding Procedures and Techniques, including SMAW, GTAW, and GMAW.
Day 5: Welding Procedures and Techniques, including SMAW, GTAW, and GMAW.

Course Starting Date: 10/20/2021 - 10/23/2021
Location: Lincol Electric Company, 25611 North Ave
Phone: (216) 393-2519

Register
**REGISTRATION**

**Welding School Information**

The following additional information applies to the Lincoln Electric Welding School attendees.

**Age**
All participants must be 18 years of age or older.

**Cafeteria**
The cafeteria is available to students between the hours of 7:30 to 8:00 a.m. and between 10:50 and 11:20 a.m.

**Welding**
No welding or grinding will be allowed when the blowers are "OFF". Welding is restricted to the welding "arm" in the booth. Do NOT weld on the tabletops!

**Legal Holidays**
The Welding School is open 51 weeks a year. Closed days are: Good Friday, Memorial Day, 4th of July, Labor Day, Thanksgiving Day, Christmas Day and New Year’s Day.

**Attendance Policy**
Students must be in attendance for at least 80% of each program attempted to successfully complete that program.

**Passing Requirements**
During and at the end of each program, written tests and welding samples will be tested to determine the student’s ability to successfully complete and pass each program. Weld samples are tested to AWS, ASME and API welding codes. Written tests are graded on the following scale:

- 100 – 90% = A 80 – 89% = B
- 70 – 79% = C 60 – 69% = D
- 59% or < = F and will NOT pass the school’s standards.

**To File A Grievance**
To file a grievance, all students should personally submit a written complaint to the Manager of Training and schedule an appointment to discuss the complaint. If a student is not satisfied with the results of the discussion, he or she has the right to file a formal complaint with the Ohio State Board at:

The State Board of Career Colleges and Schools
30 East Broad Street, Suite 2481
Columbus, OH 43215-3414
Phone: (614) 466-2752
Fax: (614) 466-2219
Toll Free: 1-877-275-4219
Lincoln School Number: 71-02-0059T

**Spare Time Activities**
There are many interesting things to do in Cleveland during your free time. Cleveland is home to three professional sports teams. You can enjoy the Cleveland Orchestra, Rock & Roll Hall of Fame and Museum, and the Cleveland Art Museum and Gardens. Water sports, live theater and other entertainment are also available to enjoy.

If you would like to receive a complete directory of things to see and do in Cleveland, call the Ohio Tourism and Travel Bureau at 1-800-BUCKEYE. You can also find information on the internet at www.cleveland.com.

**Refund Policy**
A registered student who withdraws before the first class will not receive a refund of the registration fee deposit.

For students who attend part of a class then withdraw, refunds shall be made per the Ohio State Board of Career Colleges and Schools’ policy for “clock hour” programs in accordance with the following procedures:

1. A student who starts class and withdraws before it is 15% completed will be obligated for 25% of the tuition and refundable fees plus the registration fee.

2. A student who starts class and withdraws after it is 15% complete but before it is 25% completed will be obligated for 50% of the tuition and refundable fees plus the registration fee.

3. A student who starts class and withdraws after it is 25% complete but before it is 40% completed will be obligated for 75% of the tuition and refundable fees plus the registration fee.

4. A student who starts class and withdraws after it is 40% completed will not be entitled to a refund of the tuition fees.

A student’s withdrawal date used to calculate refunds shall be the student’s last date of attendance in the class.

**Your Diploma - A Source of Pride and Accomplishment**
Ask any of the graduates of the Lincoln Welding School about their training. They will tell you Lincoln trained people have practical training as well as theory. Lincoln graduates have made a tremendous reputation for the school and the diploma you will receive will be proof of your accomplishments.
General Information

Where/When
The Welding School classes and Technical Training programs are conducted at the Lincoln Electric Company Global Headquarters in Cleveland, Ohio. Hours are:
» Welding School 8:00 a.m. – 2:30 p.m.
» Technical Training 8:00 a.m. – 4:30 p.m.

Safety
All participants will be required to wear safety footwear and safety glasses with sideshields.

Welding School
» Ankle High Leather Shoes with Safety Toes Required
» If Wearing Glasses, They Must Be the Safety Type

Technical Training Programs
We will provide safety gear as needed.

Please Note
Lincoln Electric has an Emergency Plan in place, which will be explained to you at the start of the program in the event that an evacuation of the facility is necessary.

Equipment - Welding School
Locks and lockers are furnished. All other equipment is the responsibility of the student. Students should furnish any personal items such as a flashlight, channel locks and/or helmet. Items such as helmets, lenses, gloves, leathers and caps are available in the school at special student prices. If equipment is purchased at the school, the cost will range from $25.00 to $250.00, depending upon the number and the type of article purchased. Please note the school is not responsible for articles left in lockers.

Equipment - Technical Training Programs
Welding accessories like jackets, helmets and gloves will be provided but you may wish to bring your own.

Included in Course Fee - Welding School
Price of classes includes: training handouts, welding consumables, steel practice coupons (also stainless steel and aluminum when applicable) and certificate.

Included in Course Fee - Technical Training Programs
Price of seminar includes: lunch daily, snack at breaks, technical books, training handouts, tours, a group dinner (typically first night of program) and any incidentals.

Parking
Participants may use the Lincoln Electric parking lot, but must observe our same employee rules:
» Do NOT Park in Areas that are “Reserved”
» Do NOT Park in Areas Painted “Red”
» Do NOT Park in “Guest Parking”

Travel
Please do NOT make any travel arrangements until your reservation for class has been confirmed. The Cleveland Hopkins International Airport serves the Cleveland area.

No Smoking
The Lincoln Electric Company strictly prohibits smoking on company premises, including the Lincoln Electric Welding School and training lab facilities and the parking lot. (Ask instructor for designated smoking area)

Restricted Areas
Unless accompanied by an instructor, ALL areas of the plant are off limits. Furthermore, the Lincoln Electric Welding School or training labs should not be occupied unless accompanied by an instructor.

Personal Conduct
All participants are expected to conduct themselves in a respectable manner at all times. Misconduct such as fighting, use of illegal drugs or alcohol, or carrying of weapons will not be tolerated. Deliberate damage, theft or any vandalism to tools, equipment or facilities will not be tolerated. During class, cellular phones and pagers are asked to be turned off. Appropriate time will be allotted throughout the course for conducting personal business.

Personal Business
Lincoln phones are for company business and therefore should not be used for personal calls. Make all personal calls on the pay phones provided throughout the building.

Cancellation Policy - Technical Training Programs
An enrollment agreement may be cancelled within five calendar days of signing, provided the school is notified of the cancellation in writing. The school shall promptly refund in full all tuition and fees paid pursuant to the enrollment agreement. This provision does not apply when the student has already started classes.
HOTEL AND CONTACT INFORMATION

For Welding School Attendees
For students staying long term, several residents near the Lincoln Electric Welding School have rooms for rent. Prices range from $40 to $100 per week—room only, no board. Contact the Lincoln Electric Welding School for a list of homes. Make arrangements in advance of your arrival in Cleveland. Meals are available at nearby restaurants. Lincoln Electric’s cafeteria serves noon meals at a very reasonable price.

Hilton Garden Inn - Mayfield
700 Beta Drive
Cleveland, OH 44143
Phone: (440) 646-1777
Approx. 9 miles from Lincoln Electric.
Ask for Lincoln Electric Rate

Radisson - Eastlake
35000 Curtis Boulevard
Eastlake, OH 44095
Phone: (440) 953-8000
Fax: (440) 953-1706
Website: www.radisson.com/eastlakeoh
Shuttle service available
Approx. 8 miles from Lincoln Electric

For Technical Training Program Attendees
A block of rooms is reserved at one of the following hotels for each seminar. After registering online, you must contact the hotel directly to make your specific room reservations. Lincoln Electric has negotiated a discounted rate for you.

Wyndham Playhouse Square
1260 Euclid Avenue
Cleveland, OH 44115
Phone: (216) 615-7500
Fax: (216) 615-3355
Shuttle service available
Approx. 10 miles from Lincoln Electric

Doubletree Hotel - Cleveland
Downtown/Lakeside
1111 Lakeside Avenue E
Cleveland, OH 44114
Phone: (216) 928-3230
Ask for Lincoln Electric’s rate.
Daily rate includes free hot breakfast buffet.

The Lincoln Electric Company
22801 St. Clair Avenue
Cleveland, OH 44117-1199
Phone: (216) 481-8100
Fax: (216) 481-9600
email: weldschool@lincolnelectric.com

The Lincoln Electric Welding School
Phone: (216) 383-2259
Fax: (216) 383-8088
email: weldschool@lincolnelectric.com

The Lincoln Electric Company Technical Training Department
Phone: (216) 383-2240
Toll Free: (888) 635-4709
Fax: (216) 383-8025
email: training_seminars@lincolnelectric.com
e-mail: schoolinfo@lincolnelectric.com
Arc Welding Process Training Materials

The Lincoln Electric Company is dedicated to the advancement, training and safe practice of the art and science of arc welding.

One of the main initiatives in this effort is the production and distribution of some of the most effective training materials in the industry. These materials are made available for little or no cost to welding instructors and include:

Arc Welding Safety – Materials and Products

No Teacher Left Behind™ CD’s
» Comprehensive curriculum in SMAW, GTAW, FCAW, SAW, and Oxyfuel.
» AWS EG2.0-95 S.E.N.S.E. Program compatible.
» Modular format for easy customization.
» Includes MS PowerPoint® presentations, additional talking points, safety information, troubleshooting, video clips, glossary, sample tests and additional materials in PDF format.

“Welding Connects Your World” online curriculum
» Developed in conjunction with Team AgEd and the FFA.
» Includes an e-learning course, PowerPoint™ presentations, facilitator guides, SAE welding project ideas and educational resources.
» Website designed for individual student or classroom use.

Technical Literature and Posters
» “How To/Procedure Guides” on many arc welding topics.
» Order “Welding Instructor’s Educational Resources Handbook” (BK-259) for samples of all free literature.
» Posters include Careers in Welding, Process Selection Chart, Welding Positions, Weld Defects, and more.
» Order individually or as the “Educators Poster Pack (BK-296).

For more information, to register or to order visit;
www.agedlearning.com
http://www.jflf.org/
James F. Lincoln Foundation

The Arc Welding Bookshelf
The James F. Lincoln Arc Welding Foundation was created through a deed of trust "to encourage and stimulate scientific interest in and scientific study, research and education in respect of the development of the arc welding industry through advance in the knowledge and design and practical application of the arc welding process." As a contribution to scientific progress and to promote industrial progress through education, the Foundation produces and publishes books and other educational materials as a non-profit service to the industry.

JFLF Overview
The James F. Lincoln Arc Welding Foundation is a non-profit, welding education organization founded in 1936 to promote welding as a better method of joining metals and to promote welding as a career choice. Today numerous low cost welding educational textbooks, videos, DVDs, teaching aids and no cost periodicals and technical papers are available through the Foundation.

In addition, the JFLF awards over $45,000 in cash and prizes each year to the winners of its welding design project contests, as well as the state and national SkillsUSA welding competition winners. See their website, www.jflf.org for details on specific contest rules, regulations and application forms.
James F. Lincoln Foundation Arc Welding Bookshelf
A Few of the Popular Textbooks and Videos

The Procedure Handbook of Arc Welding (PH)
14th Edition
Published by The James F. Lincoln Arc Welding Foundation
With over 500,000 copies of previous editions published since 1933, the Procedure Handbook is considered by many to be the “Bible” of the arc welding industry. The hardbound book contains over 750 pages of welding information, techniques, procedures, photographs, drawings and charts. Much of this material has never been included in any other book. A must for all welders, supervisors, engineers and designers. Many welding instructors will want to use the book as a reference for all students.

Metals and How to Weld Them (MHW)
2nd Edition
by T.B. JEFFERSON and GORHAM WOODS
This book describes the internal structure of metals and its relation to mechanical and physical properties and weld ability. This dual purpose textbook and reference manual is written in non-technical language so students, welders, supervisors, engineers and educators will easily understand all data. The 400 page book is 6”x9” with gold embossed hard cover.

Arc Welded Projects, Vol. V (AP-V)
Published by The James F. Lincoln Arc Welding Foundation
The projects described in this 200 page book represent the range of entries submitted in the James F. Lincoln Arc Welding Foundation Award Programs both as to the type and size of the project, and the nature of the descriptive information included. Each project is detailed, including prints and bills of material, so the do-it-yourself person can understand and build these helpful projects. It also provides great ideas for welding school class projects. Arc Welding Projects I through IV also available.

Learn To Weld—The Lincoln Way: An excellent visual guide for shielded metal arc welding. This tape concentrates on the fundamental techniques of horizontal, vertical up, and overhead welding. Safety section and technical welding guides included. Running Time: 18 minutes. ED201 DVD, $10.00

Welding—Making It Happen: An excellent video portraying how welding affects our daily lives. Great for teachers and career counselors with students, parents, and the general public. Produced by N.E.M.A. Running Time: 16 minutes. ED204 DVD, $10.00

Welding Safety: Thorough presentation on general shop safety, hazards in the workplace, and information on the subject of welding safely. MC15-156 Interactive DVD, Pay $5.00 S. & H. only

Introduction to Semiautomatic Wire Welding: Provides the fundamental expertise necessary to successfully apply both gas-shielded and flux-cored welding wire. Running Time: 41 minutes. ED221 DVD, $10.00

Basic Electricity for Arc Welding: Introduces the beginning welder to basic component parts and terminology of arc welding. Running Time: 9 minutes. ED222 DVD, $10.00

Introduction to Inverter Technology: Inverters reflect the trend in industry for greater efficiency and higher quality welding machinery with inverters being designed to satisfy that demand. Running Time: 28 minutes. ED223 DVD, $10.00
## EDUCA TIONAL MATERIALS

### James F. Lincoln Foundation Arc Welding Bookshelf

**ORDER FORM**

**OR PLACE YOUR ORDER AT WWW.JFLF.ORG**

**ORDER FORM:** Educational Resources Division, The Lincoln Electric Company, P.O. Box 17188, Cleveland, OH 44117 FAX NO. 440-951-2110

To check on your order, call Book Division – 440-975-4338 Ext-230.

Please print or type your name and address in the space below. Enclose check or money order with your order, do not send cash through the mail.

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**Method of Payment:** CHECK ONE: (PayPal, No C.O.D. Orders)

- **PayPal** – Now available for on-line orders
- **Cash Order** – Check or Money Order Enclosed, U.S. Funds only. Make checks payable to: The James F. Lincoln Arc Welding Foundation
- **Credit Card** – [ ] Visa [ ] MasterCard [ ] American Express [ ] Discover

**Account No.**

**CVV**

**Exp. Date:**

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**Signature as it Appears on Card:**

The James F. Lincoln Arc Welding Foundation and Lincoln Electric Company produce textbooks and teaching aids devoted to furthering knowledge of the arc welding process, engineering design information, procedural data and skill development techniques are illustrated and explained in detail. This publishing effort is provided as a non-profit service to industry and education. Books are priced accordingly. (Caution Purchasing Agents: Purchase Orders must be “Check with Order” including UPS charge from chart above.) - Credit card charge, cash, check or money order MUST accompany all orders. Any orders received without payment will be returned.

**Return Policy:**

We will accept returns within (1) one year of purchase. **NO RETURNS WILL BE ACCEPTED AFTER A YEAR** **The book must be in good condition and resalable. Please return to the address:**

**The James F. Lincoln Foundation**
c/o AP Direct
7181 Industrial Park Blvd.
Mentor, OH 44060

**Shipping Policy:**

1. Continental U.S. Shipping Policy

- **UPS Shipping**
  - All prepaid orders by check use chart below for UPS charge.
  - Order will ship within 7 days from receipt of order.

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2. Outside Continental U.S. Shipping Policy

- Payment must be prepaid in U.S. Funds on all orders. Consult Book Division at www.jflf.org

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<td>AC – The Am. Century of John C. Lincoln</td>
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<td>DI01017 – Solutions to Design of Weldments</td>
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<td>FBW – Full-Bore Welding</td>
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<td>ED-201 DVD – Learn to Weld - The Lincoln Way</td>
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<td>ED-204 DVD – Arc Welding - Making It Happen</td>
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<td>ED-212 DVD – Intro. to Arc/Arc Welding</td>
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<td>MCT5 - 156 – Welding Safety Pay SH Only</td>
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**Project Kit – Airplane** | 250 |

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<td>WC-8 – Welding Preheat Calculator</td>
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<td>WC-332 – TIG Calculator Tri Lingo</td>
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<td>C3.410 – Arc Welding Guide</td>
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